Microserivces and beyoynd

Lectures about microservices prepared by Aliaksei Bialiauski

Abstract:
This is a series of lectures related to microservices development. The lectures provide basics and includes practical best practices for each topic.

Prerequisites (it is expected that listener knows this):

- Spring Framework
- SQL
- Containerization and Docker

Course Structure

- API size, database-per service
- Service discovery
- Gateways
- Load balancing
- Communication: sync vs async
- Blocking IO vs NIO
- Messaging
- Data formats: XML, JSON, protobuf, etc.
- Saga, Event sourcing, CQRS
- NoSQL
- Caching
- Rate-limiting
- Load shedding
- Circuit breaker
- Infrastructure, autoscaling

Tools and technologies we are going to learn:

- K8s
- Kafka
- Redis
- MongoDB
- Spring Reactive

Application we are going to build: Peopleforce analogue for Resource managers and Project managers in the Solvd company
and use:

- Saga
- Message broker
- NIO
- External cache
- L7 and L4 load balancing
- Service mesh
- DevOps practices